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ABSTRACT

The purpose of this paper is to examine some of the ways in which graduate students engage in interactive online university courses and use discussion as a tool for thinking and for socially negotiating meaning. In particular, it investigates the idea that discursive interaction in asynchronous, text-based, online courses may be uniquely suited to fostering higher order thinking, social construction of meaning, and shifts in perspective. This line of thinking is supported through consideration of meaning in technologically mediated learning environments. The theoretical argument utilizes two data sources. First, observations are drawn from developing and teaching four online courses in three different versions and topic areas over the past few years. Second, results of a discourse analysis of contributions to an online interactive conference of a graduate-level education course are described. Findings lend support to claims in the research about the unique potential of online discussion-based courses as learning environments. Materials from the online course, "Discourse in Classrooms," are appended. (Contains 25 references.) (AEF)

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Breaking New Ground in Collaborative Thinking

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Teaching Online:

Breaking New Ground in Collaborative Thinking

Much recent research has examined the complex ways in which school learning and social practices are reflected in and negotiated through discourse (Gee & Green, 1998; Lapadat, 2000). Gee and Green summarize the key findings of this work as showing:

> the ways in which opportunities for learning are constructed across time, groups, and events; how knowledge constructed in classrooms (and other educational settings) shapes, and is shaped by, the discursive activity and social practices of members; [how] patterns of practice simultaneosuly [sic] support and constrain access to the academic content of the "official" curriculum; and how opportunities for learning are influenced by the actions of actors beyond classroom settings. (p. 119)

What counts as knowing and the rules for participation differ across classrooms. Both are shaped by classroom discourse and practices. Through the understandings they construct by participating in the events and talk in classrooms, class members contribute to the sociocultural resources of the class as a whole, with implications for their own learning and for the learning of their classmates (Gee & Green, 119-120). This occurs through their construction of local understandings, or situated learning (p. 122), and by their reflexive indexing and negotiating of cultural models, or shared informal theories (p. 123).

Recent thinking about online course design and delivery draws on constructivist perspectives and acknowledges the integral role of discourse in learning. In a critical examination of the role of the World Wide Web in education, Roschelle and Pea (1999) identify three change vectors: towards collaborative representations, towards advanced socio-cognitive scaffolding, and towards tools that foster self-improving communities. These directions can be seen in the most recent wave of publications about online course development and delivery. For example, Jonassen, Davidson, Collins, Campbell, and Haag (1995) call for constructivist and situated learning theory to be applied to the design of online courses, in recognition that "learning is necessarily a social, dialogical process in which communities of practitioners socially negotiate the meaning of phenomena" (p. 9). Schallert and her colleagues (1999) point out that, in traditional face-to-face (F2F) classroom discussion, it is difficult to foster the kinds of deep discussion that lead to learning. They suggest that attaining genuine discussion is especially important in advanced seminars in higher education, and that computer-mediated communication (CMC) is an alternative discussion forum that offers increased access to diverse voices (also see Schallert, Lissi, Reed, Dodson, Benton, & Hopkins, 1996). Cooper and Selfe (1990) concur, pointing out that an advantage of CMC as a discussion forum is that it might "allow interaction patterns disruptive of a teacher-centred hegemony....[enabling students] to create internally persuasive discourse as well as to adopt discourse validated by external authority" (p. 847; also see McComb, 1994).

Blanton, Moorman, and Trathen (1998) conducted a review of the research literature on computer technologies and communication in education. Taking a social constructivist stance, they argue for the value of integrating such technologies into

teacher education programs, as computer-based telecommunications have the potential to reconstruct pedagogy. As an example, they note that "computer- and video-mediated conferences are tools especially suited for constituting social arrangements that enable the joint construction of knowledge" (p. 238). However, they criticize much research into telecommunications in education as "atheoretical" (p. 243), as "mak[ing] causal claims based on inappropriate or inadequate evidence" (p. 248), as being overly driven by the aims of justifying funding or saving money on instruction (p. 258), and for the paucity of studies examining the actual discourse patterns in online communities (p. 253). They conclude "that the research is philosophically and theoretically barren" (p. 259), and seek to redress that by proposing cultural-historical activity theory as a theoretical framework for future research in this area. They posit four principles: 1) "that consciousness emerges out of socially organized practical activity (labor)" (p. 261); 2) "that social processes give rise to individual processes" (p. 261); 3) "that consciousness evolves through tool-mediated activity" (p. 261); and, 4) that there is a "distinction between scientific and spontaneous concepts" (p. 262).

My purpose in this paper is to examine some of the ways in which graduate students engage in interactive online university courses, and use discussion as a tool for thinking and for socially negotiating meaning. In particular, I investigate the idea that discursive interaction in asynchronous, text-based, online courses may be uniquely suited to fostering higher order thinking, social construction of meaning, and shifts in perspective. I support this line of thinking by considering the qualities of written discourse and its implications for cognitive and social construction of meaning in technologically mediated learning environments (Gee, 1996; Herring, 1999; Lapadat

1995, 2000, in press a, in press b; Lemke, 1989; Ong, 1982; Schallert et al., 1999; Wells, 1990).

The theoretical argument utilizes two data sources. First, I reflect on my observations drawn from developing and teaching four online courses in three different versions and topic areas over the past few years. Second, I describe the results of a discourse analysis of contributions to an online interactive conference of a graduate-level education course.

Observations from Teaching Online

During the last three years, I have been involved in designing, developing, and teaching graduate education courses online. The University of Northern British Columbia (UNBC) serves the northern two thirds of the province of British Columbia, an area that is large, rugged, and sparsely populated. As well as offering two graduate program streams at the main campus in Prince George, the Education Program at UNBC also offers graduate programs at three regional campuses on an intermittent basis. These regional courses have been taught F2F, which, at times, poses considerable travelling hardship for instructors as well as for many of the students. For example, our campus in the Northwest is centred in Terrace, located eight to ten hours by road from Prince George, and not served by a regular, direct air link to Prince George. Furthermore, many students enrolled in the Northwest travel in from surrounding communities for the weekend courses, driving up to four hours each way, and often having to arrange overnight accommodation. As this is an northern, mountainous area, snowy conditions prevail from October through to April, and road conditions are often hazardous. Thus,

quality alternatives to F2F instruction serve a practical purpose, and acted as a stimulus for my initial interest in investigating online teaching.

I began developing the first course as an intact all-on-the-web course (supported by telephone, fax, e-mail, surface mail, and the bookstore and interlibrary loan systems), in collaboration with an internet design consultant.[1] We designed this asynchronous, text-based webcourse to be interactive, consistent with social constructivist principles (Jonassen, et al., 1995). The course topic of EDUC 645, "Discourse in Classrooms," matched well with a discursive approach to learning. I first taught the course online in the Winter semester of 1998 to six graduate students, and then, following some minor revisions to the course, I taught it again to a cohort of sixteen graduate students in the Northwest in Winter 1999. Students read one or two articles per week and posted commentary on the articles and in response to each other on weekly discussion topics using the website's conferencing facility (the "Discussion Forum").[2] They also selected additional articles pertaining to these topics to read individually and present to the class online. They gave brief reports online about their term paper research and about a "mini" research project that they conducted.

In Winter 1999, I used the original course website as a template for a new online course, "EDUC 648: Oral Traditions and Literacy Development." This thirteen-week course combined several formats. We met F2F five times over the semester (the first week, and thereafter, approximately every three weeks), with students at a distance participating via audioconference. The other eight intervening weeks required web-based

[1] Co-authored by Judith C. Lapadat and Peter Thompson, 1997
[2] Designed by Stan Beeler, UNBC, 1997

interaction in the Discussion Forum. In contrast to the original online course, for which the website was fully developed and accessible prior to the beginning of the course, I built the website for this new course as the course was in progress.[3] My most recent course website, using the same basic template, was for another new course I offered in Fall, 1999, "EDUC 691: Classroom Assessment Practices." This was a combined F2F/audioconference course, with the website available as an optional, adjunct means of communication and discussion for class members. I also have supervised two graduate students who have designed course websites for use in adult education settings (Bialobzyski, 1999; Yun, 2000).

These varied experiences with online course development and delivery have yielded some general observations. My first three offerings were highly successful in the web format, as shown by the number and length of students' contributions, the depth of discussion, the quality of the assignments they turned in, and their satisfaction level expressed in formal course evaluations as well as in informal comments. However, in EDUC 691, although the course itself was very successful, the optional web Discussion Forum seldom was utilized by the students as a medium for discussion. This was despite the fact interest level in the course was high, access to the site was straight-forward, and the majority of the students were comfortable using computers (in fact, three of them previously had taken another web-based course from me). From this, it appears that making the web discussion required rather than optional, setting posting deadlines, and

[3] The course originally had been scheduled as a F2F format in Prince George, and I agreed to modify it on short notice to accommodate several students at a distance who wished to enroll.

marking participation may be necessary stimuli to online engagement in webcourses for this population (Harasim, Hiltz, Teles, & Turoff, 1993).

My experiences also lend support to webcourse delivery issues that have been documented by others. These include: the importance of clear, efficient procedures and supports for communicating with students prior to and during the course; the need for strategies to address some students' fear of technology such as by providing a pre-course demonstration; the need for good technical support while the course is ongoing; adaptability to accommodate late joiners; the importance of instructors establishing a facilitator role; time and funding to update and maintain online courses; and recognition of and planning for the time-consuming nature of such courses (Harasim et al., 1993; McComb, 1994).

However, the key topic I wish to address here relates to the quality of the discourse that I observed in each of the three courses. During the first online course, I was interested to note that class members became intensely engaged in the course and contributed many, lengthy, deeply thoughtful remarks to the discussion. The number and length of their contributions far exceeded the minimum requirements for participation. Not only that, but it seemed to me that the level of discussion was superior to what I had observed teaching the same course F2F. These impressions were fortified by my second experience with EDUC 645 on the web, and also by the web offering of EDUC 648. I began to wonder how to describe the discursive characteristics that I was observing in these online courses, and to speculate about why this online environment appeared to be so successful in scaffolding students' thinking about course themes. In the next section, I will describe a discourse analysis that I conducted using the first 100 contributions to the

first EDUC 645 (approximately the first one third of the course), and then I will conclude by presenting some ideas that may account for the quality of these online discussions.

Method

Participants included six graduate students enrolled in an online graduate education course during the winter semester (January -- April, 1998). As the instructor, I also contributed to the online discussion. Three of the students were in three different distant communities, and the other three resided locally. Two participants were college instructors with specialties in technology and Canadian First Nations education respectively; one taught adult literacy in a private setting; one not currently practicing had a background in speech-language pathology and teaching English as a Second Language; one taught high school social studies; and one was an elementary learning assistance teacher in an inner city school. One graduate student was male, and the rest of the participants were female.

In the discourse analysis, I traced how the participants contributed to the development of topics, and how individual and group points of view shifted over time (Lapadat, 2000). I used an approach to analysis which involved sorting the textual record of online contributions into thematic categories and subcategories with the help of qualitative analysis software (NVivo, by Qualitative Solutions and Research: see Fraser, 1999; Richards, 1999) to trace discursive threads (see Lapadat, 2000). In this way, I was able to reconstruct how class members negotiated meaning as they collaboratively wrote themselves into new understandings, thereby scaffolding their intellectual work.

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Analysis

I begin by discussing the establishment of community and the course participation structure. Then I describe the qualities of the online discourse, and consider ways in which textual contributions exhibited characteristics of both oral and written language. I conclude by suggesting how discursive characteristics in this online environment fostered higher order thinking, joint construction of meaning, and individual shifts in perspective.

Community and Participation Structure

At the outset of the course, participants did not all know each other. The three "in-town" graduate students knew each other, and two of them had met "Lisa" previously. Neither "Patrick" nor "Colette" had met any of the other students. As the instructor, I had taught all of the students in previous F2F courses, except Colette whom I had not met. Furthermore, Lisa, Patrick, and Colette were late in joining the online discussion for various reasons, including late registration, technical difficulties, and anxiety about posting online.

Nevertheless, a collegial, supportive atmosphere quickly developed among class participants. Class members addressed each other by name, acknowledged each others' points in an encouraging way, and expressed disagreements constructively and with tact. For example, early in the course, class members established a practice of explicitly marking to whom they were directing a particular response:

> Post 13
> Elaine Jan 12 22:36:16 1998
> SUBJECT:Week 2 Theories of Classroom Discourse
> Sub Topic: more to Rita and others 884673376
> <P>Message:
> Hi Folks! Rita: In regard to students and teachers perhaps having different schemas. . . .

Post 14
Rita Jan 12 22:38:47 1998
SUBJECT:Week 2 Theories of Classroom Discourse
Sub Topic: Elaine's comment 884673527
<P>Message:
Just a brief comment Elaine before I go to bed - you're right on the mark. . . .

As shown in this example, they accomplished this explicit marking by the wording they chose for the subtopic header,[4] by addressing each other by name, and by restating the key idea to which they were responding. As a result, they not only constructed a discussion that felt coherent (Schallert et al., 1996), but also they established a personal and supportive tone to the discussion through the use of first names and acknowledgement of each other's ideas.

Class members did not always agree with each other. However, even when disagreeing, their responses were respectful and constructive:[5]

Post 87
Patrick Feb 4 8:49:22 1998
SUBJECT:Week 5 Secondary and Post-Secondary
Sub Topic: Sainsbury-Meaning 886610962

<P>Message:
. . . "Each child has his or her individual differences: idiosyncrasies and deviant behavior.... The accepting teacher treats all this as legitimate and valuable...." (Sainsbury, p. 123). YIKES! Can you imagine a grade 5 class, 25 students, Friday afternoon and an accepting teacher tolerating deviant behavior. Sounds like a recipie for a 3 aspirin headache. Great in theory but does in work in a practical situation? A similar comment can be made about all of the individual attention given by an accepting teacher. Does the teacher have time to spend on each student to create new linkages? What about classroom management?

. . . .

[4] Subject headers were conference topics that I had pre-established to structure the Discussion Forum. However, participants could label their own subtopics, or conversational threads, within these topics.
[5] In these excerpts, I have retained the exact spelling, grammar, fonts, and so on as used by the participants. However, where students have used direct quotations from texts but failed to reference them, I have attempted to insert the correct references after the fact.

Post 89
Elaine Feb 4 14:20:21 1998
SUBJECT:Week 5 Secondary and Post-Secondary
Sub Topic: response to Patrick 886630821

<P>Message:
I appreciated your comments particularly about classroom managment and the real possibility of latching on to a bottle of asprin. Deviant behavior in classrooms is something we all struggle with. I think many of the ideas in this article such as students being able to make connections to prior learning to gain understanding, and the importance of ensuring that students do have the necessary background knowledge so that connections can be made are important points for us as teachers. We need to provide opportunities for students to make these connections. . . .[34 lines of text supporting this argument theoretically and with practical teaching anecdotes]. . . .In order to provide educational opportunities for all students we must not only recognize what their needs are but have the necessary resourses to address those needs, whether that be in the form of trained personnel or materials. Maybe then we wouldn't need to clutch the bottle of asprin? What do you think?

The sense of community that arose also was facilitated by the first course requirement, which was to post a self-introduction to the "Meet the Class" page. In addition, at the outset, I provided explicit guidelines for online contributions: "As this course is organized around interaction and discussion, personal opinions and perspectives are encouraged. However, class members must ensure that their contributions are cordial, respectful, and constructive in tone."

All voices were heard in the discussions. Although some class members tended to write more frequently and at greater length than others, all participants contributed to all of the weekly topics at a level well above the minimum expectations. One reason for this was that I built specific expectations for participation into the course design. I explicitly informed class participants that they were expected to contribute thoughtful remarks to the discussion each week by the posting deadline, present their ongoing work online, and

provide feedback to each other, and that participation would be graded on the basis of both quantity and quality. Thus participation structure initially was established by the course design, and further developed by the class participants by the way they interacted to create a safe and supportive online community.

Qualities of the Online Discourse

A number of researchers have commented on the depth and coherence that can be achieved in online discussions (Lapadat, 2000; McComb, 1994; Schallert et al., 1996, 1999). In this section, I identify and describe some of the qualities of the discourse in this webcourse.

One interesting characteristic of the discourse related to the emergence and maintenance of topics, or themes. As mentioned above, I pre-established weekly topics in the Discussion Forum, as well as additional topic headers pertaining to each course assignment, the online article presentations, technical support ("Problems and Solutions"), and a student chat area ("The Back Porch") (see Appendix A). I also provided weekly notes to introduce the weekly topics and stimulate discussion linked to the assigned readings (see Appendix B). This basic framework structured the conference discussions. However, within this basic framework, a great number of topical threads, or subtopics, emerged. Furthermore, a number of persistent themes also emerged that cut across and overarched the weekly topics and readings. As described in Lapadat (2000), these themes linked the superordinate topic of classroom discourse with student identity, administrative structures and aims, and the issue of school change. Other overarching themes related discourse to culture, evaluation, speech registers, teacher training, and transmission of knowledge. These subtopics and themes emerged freely in participants'

responses to each other and to the readings, thus were related to but not constrained by the pre-designated weekly topics. This can be described as an "open framework construction;" the conference was pre-structured in such a way as to elicit participation and topical contributions, yet sufficiently open that novel and productive discursive themes emerged.

In contrast to what I often have observed in F2F class discussions, most of the contributions to the online conference were relevant to course topics and the emergent discursive themes at multiple levels, with few digressions. When there were apparent digressions, these were looped back into the discussion using a number of strategies, either by the original contributor, or by others. For example, in Post 86, Elaine presents a lengthy story about a former student "J. R." who was failing his elective courses at his new school, and how she took it upon herself to intervene (see Appendix C). She links this story to a subtopic I introduced a few posts earlier about how schools sort students (J. R. is being sorted into the 'failure" category), and to the ongoing theme of culture (how students can be marginalized on the basis of social and cultural differences despite good effort and ability). Also, in this story, she begins to develop a personal theme that she continues to elaborate throughout the remainder of the online course. That is, she begins to articulate a view of herself as an advocate for the students with whom she works as a Learning Assistance Teacher, and whom she increasingly perceives as poorly served by the wider educational system.

In this example, we also can see how discussion participants worked at cohesion: Elaine explicitly referenced Judy's earlier presentation, my comment about sorting students, and the discussion about Rita's article presentation. It was typical in these data

that topical threads and the emergent overarching themes were jointly sustained over many turns and many weeks through the use of such cohesive ties, as well as through thematic intertextual referencing. This active listening seemed to contribute to a sense of an inclusive community, perceived topical coherence, and also the opportunity for collaborative and sustained intellectual inquiry. That mutually incompatible perspectives co-existed (Lapadat, 2000) did not seem to threaten the ongoing joint construction of meaning.

Oral Versus Written Language Characteristics

In reflecting on the qualities of the discourse described above, it seems to me that these qualities might be attributable, in part, to the online textual environment. As others have noted, online communication is a form of writing that exhibits some characteristics more typical of oral language than of formal writing (Harasim et al., 1993). As this course was a graduate seminar, the students were highly literate practitioners of text-formed thought, and in the process of being further inducted into an academic discourse (Lapadat, 1999; Ong, 1982). Also, they were cognizant that their contributions would be evaluated, hence it is likely that they would use more formal language than in, for example, casual e-mail communication with friends. Nevertheless, contributions show a blend of both written language and oral language characteristics, which I believe may have been particularly facilitative of the cognitive level of the discourse.

Ong, in his classic book published in 1982, compares the characteristics of orality and literacy, and the implications for thought and knowledge in primarily oral cultures versus literate cultures. Yet even in cultures like our own, oral patterns co-exist with more literate patterns of discourse and thought. In this online course, there is little doubt that

literate thought predominated, due to participants' habits of mind and literate assumptions formed through their upbringing within Canadian culture, the university communicative context which foregrounds hyper-literate academic discourse, and the use of the modality of writing as the means of communication. Some characteristics of written language apparent in class members' online posts include: the use of complete well-formed sentences; literate grammatical structures utilizing complex clausal structures rather than the additive, aggregative, and redundant patterns found in oral texts (Ong, 1982, pp. 37-41); textual argument structures that freeze meaning and rely on readers' ability to look back (Lapadat, in press a); and the use of precise, formal vocabulary.

Unlike oral discussion seminars, in which remarks are fleeting or "evanescent" (Ong, 1982, p. 32) – more an event than a constructed object – these online contributions had permanence. Class members could look back, reflect, print them out, or paste them into subsequent responses. Time was also an important factor in the online compositions. Whereas speech is very rapid and people can say a lot in a short time by "thinking on their feet," in online text-based discussion, it takes longer to compose and "say" a remark. This looking back and extra composition time creates a context of active reflection. Thus, in this course, the characteristics of written language formality, permanence, and time to reflect created a textual environment with considerable potential to foster deep meaning-making.

Yet, these online posts also retained some of the texture of oral communication. For example, although grammar and punctuation most resembled literate written discourse, participants were relaxed about matters of spelling and paragraphing. They did

not edit their writing as closely as they would for a final draft of a term paper. They did employ a literate pattern of academic argumentation:

> Post 40
> Judy Jan 22 22:26:43 1998
> SUBJECT:Week 3 Integrating language across the curriculum Elementary
> Sub Topic: Cross-cultural issues 885536803
>
> <P>Message:
> . . . .While a growing number of books discuss the content area instruction of language minority students (Mohan 1986, Cantoni-Harvey 1987 and Enright and McCloskey 1988) these works do not provide adequate information concerning diverse cultural groups. (Scarcella, 1990, pg. vii,) In other words, many instructional materials do not discuss how the cultural background of the teacher influences the teacher's teaching style and the affect that this style will have on the student as a learner.

However, they also inserted conversational elements into their contributions, as seen above in Elaine's "Hi folks!" and Patrick's "YIKES!"

Another characteristic of the online discourse that was more reminiscent of oral discussion than formal writing was the participants' ready appeal to personal anecdotes and stories from their teaching practice to anchor their points. Elaine's story about J.R. is a typical example. Here is another, more personal account from Colette:

> Post 80
> Colette Feb 2 16:47:20 1998
> SUBJECT:Week 5 Article Presentations
> Sub Topic: Interpersonal Boundaries 886466840
>
> <P>Message:
> . . . .However, I find that unreasonably high expectations foster a fear of failure from which avoidance can grow. This was my personal experience. I grew up in a village in PEI. In elementary school, I was pitted against my second cousin, Jayna and another "bright' little girl'. When I came home with the results of a test or with a report card, the response I got from my mother and grandparents was, "Did you beat Jayna?" I learned to display only those results where J. and I tied or I did 'beat' her, and eventually, as I began to have difficulty in math and science, areas where J. excelled, I gave up. This is something I regret today.

As an instructor, I have found that in their formal written assignments, most students strive to emulate the objective, detached, omniscient authorial voice that they are familiar with in professional publications, school textbooks, and traditional academic texts. As my aim is to help graduate students construct their own understandings by using texts as lenses to help them reflect on and theorize about their own practice (rather than simply summarizing and restating information transmitted by experts), I encourage them to identify and support their own perspectives. This oral-like aspect of online discussion led very naturally to participants making theory-practice connections through writing in the first person, stating opinions, and offering practical examples.

Meaning and Higher Order Thinking

A final important way in which this online writing differed from most written language is in its interactivity. Class members were not merely reading experts' words in a passive, isolated way, nor merely writing from a position of invisibility or isolation to a limited, contrived audience (i.e., the instructor), or to an unknown audience, as for published submissions or online contexts like list-serves (Lapadat, 1995). Rather, reading and writing were being employed discursively as a means of focusing members of a classroom community on matters of joint interest. By reading and responding in writing to each other, class members defined matters of importance to them, posed and solved problems, and theorized about epistemology, practice, and policy. This interactive environment, involving joint participation with a community of supportive and interested colleagues, and benefiting from a permanent discussion record and the luxury of composition time, nudged participants towards epistemic usage of text (Wells, 1990). Wells defines epistemic engagement with written text as "a tentative and provisional

attempt on the part of the writer to capture his or her current understanding in an external form so that it may provoke further attempts at understanding as the writer or some other reader interrogates the text in order to interpret its meaning" (p. 373). Such epistemic literacy yields what we also recognize as higher order thinking: analysis, synthesis, interpretation, and evaluation.

Wells points out that most educational reading activity is devoted to low level performative, functional, and informational modes of engagement – what he calls an "impoverished model of literacy" (p. 386). We can speculate that it is precisely because these low level forms of reading provide a disciplining function that students are provided only this limited initiation to literacy and literate thinking. Lemke has argued it is through writing, not reading, that individuals can come to use written language to accomplish their own goals: "it is the explicit meaning-constructing skills of *writing* alone that enable us to be truly literate" (1989, p. 296). He explains that writing is a form of social action that "however minutely or locally, tends to reconstitute and may also act to alter the social order of the community" (p. 301).

Essentially, this online course provided a context for epistemic engagement in text that class members were empowered to jointly construct on themes of importance to them in their lives and teaching practice. This outcome seems highly congruent with the aims most would hold for the kind of learning appropriate in a graduate program. Examples of how participants collaborated to construct meaning have been mentioned above, and also see Lapadat (2000) for a more explicit analysis of thematic content and how group and individual perspectives shifted over time.

Conclusion

In summary, the findings relate to the initial questions about how the qualities of online discourse might promote higher order thinking, social construction of meaning, and shifts in perspective. I have argued that participants had the opportunity to reflect on and jointly construct practice-relevant themes that became elaborated and extended throughout the whole course. I theorized that deeper levels of understanding may have been achieved, in part, because of the nature of online written discourse, as compared to oral discourse or other forms of writing. The formal nature of written communication leads to greater emphasis on finding precise terminology and phrasing to convey an idea. The permanence of print and the extended time frame allowed by the asynchronous medium permits students to look back, reflect, compose, and revise. By devoting extra time to thinking, reading, and writing, and by holding higher expectations for the clarity and coherence of their contributions, students engage in more higher order thinking, and thus potentially can achieve deeper understandings.

With respect to the question of how class members discursively negotiated and constructed meaning, I found that students drew on their own personal and professional experiences to persuade and to shape group discussion. They also incorporated other participants' responses in their subsequent self-reflections on their own claims. These findings lend support to claims in the research about the unique potential of online discussion-based courses as a learning environment.

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Appendix A

Education 645-3 Discussion Forum

Here are the current topics of discussion on this forum.Select one to see a list of messages.

Click Here for Help

Week 1 Introduction [All] [Last Five]

Week 2 Theories of Classroom Discourse [All] [Last Five]

Week 3 Integrating language across the curriculum Elementary [All] [Last Five]

Week 4 Empirical studies [All] [Last Five]

Week 5 Secondary and Post-Secondary [All] [Last Five]

Week 6 Research design and ethics [All] [Last Five]

Week 7 Reading writing language arts and literacy [All] [Last Five]

Week 8 Inquiry-oriented learning across subject areas [All] [Last Five]

Week 9 The culture of education [All] [Last Five]

Week 10 Analysis Methods [All] [Last Five]

Week 11 Diversity among learners [All] [Last Five]

Week 12 Language and Power [All] [Last Five]

Week 13 Summing it up--- final words [All] [Last Five]

Literature Search--- Term Papers [All] [Last Five]

Discourse Projects [All] [Last Five]

Problems and Solutions [All] [Last Five]

Other Assignment Questions [All] [Last Five]

The Back Porch [All] [Last Five]

Week 4 Article Presentations [All] [Last Five]

Week 5 Article Presentations [All] [Last Five]

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Week 12 Article Presentations [All] [Last Five]

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Appendix B

Education 645-3: Discourse in classrooms.
Dr. Judith Lapadat

Week 2 Notes

Your readings this week both introduce ideas about language (broadly) and discourse (specifically) in classrooms. The chapter by Deborah Hicks is a theoretical one. She takes a historical perspective in looking at the different theoretical paradigms from which research on discourse in classrooms has evolved. She classifies approaches to examining classroom discourse according to the various kinds of core assumptions, central concerns, and methods of research that characterize them and that have evolved over time.

In contrast, chapter one in Christine Pappas, Barbara Kiefer, and Linda Levstik's book (your course text) has a much more applied focus. They provide a summary of key theoretical assumptions, but do it from the perspective of the practitioner, whose foremost concerns are pragmatic ones. They emphasize three theoretical principles: 1) children learn by actively contructing meaning, 2) language is the primary means by which we represent and express meanings, and 3) knowledge is a cognitive construction, and therefore is always provisional, or "in process." They go on to define many of the central concepts and terminology that relate to each of these three principles. Pappas, Kiefer, and Levstik's perspective stands in opposition to a "transmission" model of teaching and learning. This chapter forms the theoretical foundation for the classroom strategies they discuss in subsequent chapters of the book.

As you read these two chapters, compare them according to how they present the role of language, and how they they define "discourse" or "conversation." Also, consider the sorts of questions I posed last week. Recall classrooms you have been in and ask yourself, how is talk used in various types of classrooms and in different subject areas? What implications does talk in classrooms have for students' learning, motivation, and access to knowledge? Does discourse imply just "talk," or does it have ot her meanings and dimensions? How are theories and beliefs about the nature of discourse related to educational practices and to the politics of education? Your thoughts about these questions, as well as other ideas that occur to you while you are reading, will guide the comments you write in the Discussion Forum this week.

Those of you who will be doing an Article Presentation in Week 4 should have obtained your article and be beginning to read it. The posting deadline for your Article Presentation is Tuesday midnight of Week 3.

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Post 86
Elaine Feb 3 21:16:04 1998
SUBJECT:Week 4 Empirical studies
Sub Topic: Sorters/ Judy's presentation 886569364

<P>Message:
Hi Professor! I am enjoying the discussion forum. Not only are teachers via marks sorters but the present set up in the education sorts students. I don't believe there is equal access to educational opportunities. I have felt this way in regards to opportunities for our aboroginial students for some time but the other day it really struck home. Some of my previous E.S.L. students paid me a visit the other day. 4 of these students made the honor roll and were justifiable proud. There were also quite concerned about one of their aboroginal friends, also a former student of mine. These students formed a study group and J.R. always joined them. J.R. never misses school and although he passed all of his academic courses, he failed all of his electives. Why? He did not have the money that was needed to buy material, pins and thread for his sewing project. He did not have the money needed to buy the wood for his woodworking project. He refused to tell any of the teachers why he didn't have the materials. Instead he told them he forgot and shrugged his shoulders as if he felt it was not important. There is an Aboroginal Youth Care worker at the high school who would have helped him if she had known. He was too proud to tell her. I wonder if he will get through high school- how long will it take before discouragement sets in. Nobody gets J.R. up for school or sees that he has a lunch. His friends pack extra food and he is very willing, thank God, to accept it. J.R. is a beautiful young boy- thoughtful and kind and has always tried hard in school. He's still trying and experiencing failure. As Judy mentioned in her article, some students eventually give up. I hope J.R. won't be one of them. I contacted the high school and went over to visit. J.R. now is on a meal program. He just wanted sandwiches and milk so he could still eat lunch with his very caring friends. He did ask for treats once in a while so he could share them- that brought a chuckle from us. Also he has all the materials for his courses next semester. I am worried about him, he has so many challenges to face in his home life and on top of that the inequalities he faces at school. We are not only sorting by marks but also sorting by economic factors. I do take encouragement from his friends who realize that he does not have the same opportunities as they do and do try to pave his path somewhat. Will that be enough to sustain him over the next few years? I think I need to read Rita's article again. It was so positive!